



Q FEVER

Q fever is a disease affecting animals that can be transmitted to humans. Q fever is caused by *Coxiella burnetii*, a species of bacteria that is found all over the world. Cattle, sheep and goats are the primary reservoirs of *C. burnetii*. These bacteria are able to survive for long periods in the environment.

Infection

Infection of humans usually occurs by inhalation of these organisms from air that contains barnyard dust contaminated by dried placental material, birth fluids and waste of infected herd animals. Humans often are very susceptible to the disease, and very few organisms may be required to cause infection. Other modes of transmission to humans – including tick bites, ingestion of contaminated milk and human-to-human transmission – are rare.

Symptoms

Most acute cases of Q fever begin with sudden onset of one or more of the following: high fever (104 degrees to 105 degrees F), severe headache, general feeling of illness, muscle pain, confusion, sore throat, chills, sweats, nonproductive cough, nausea, vomiting, diarrhea, stomach pain and chest pain. In general, most patients will recover to good health within several months without any treatment. Chronic Q fever, characterized by infection that persists for more than six months, is uncommon but is a much more serious disease. The incubation period for Q fever varies, depending upon the number of organisms that initially infect the patient. Most patients become ill within two to three weeks after exposure. Those who recover fully from infection may possess lifelong immunity against re-infection.

Treatment

Doxycycline is the treatment of choice for acute Q fever. Antibiotic treatment is most effective when initiated within the first three days of illness. Therapy should be started again if symptoms of the disease reappear or get worse.

Vaccination/ Prophylaxis

A vaccine for Q fever has been developed and has successfully protected humans in occupational settings in Australia. However, this vaccine is not commercially available in the United States.

Significance for Bioterrorism

Coxiella burnetii, the bacteria that cause Q fever, is a highly infectious agent that is rather resistant to heat and drying. It can become airborne and inhaled by humans. A single *C. burnetii* organism may cause disease in a **susceptible** person. This agent could be developed for use in biological warfare and is considered a potential terrorist threat.

For more information, call the North Dakota Department of Health at 701.328.2378.

